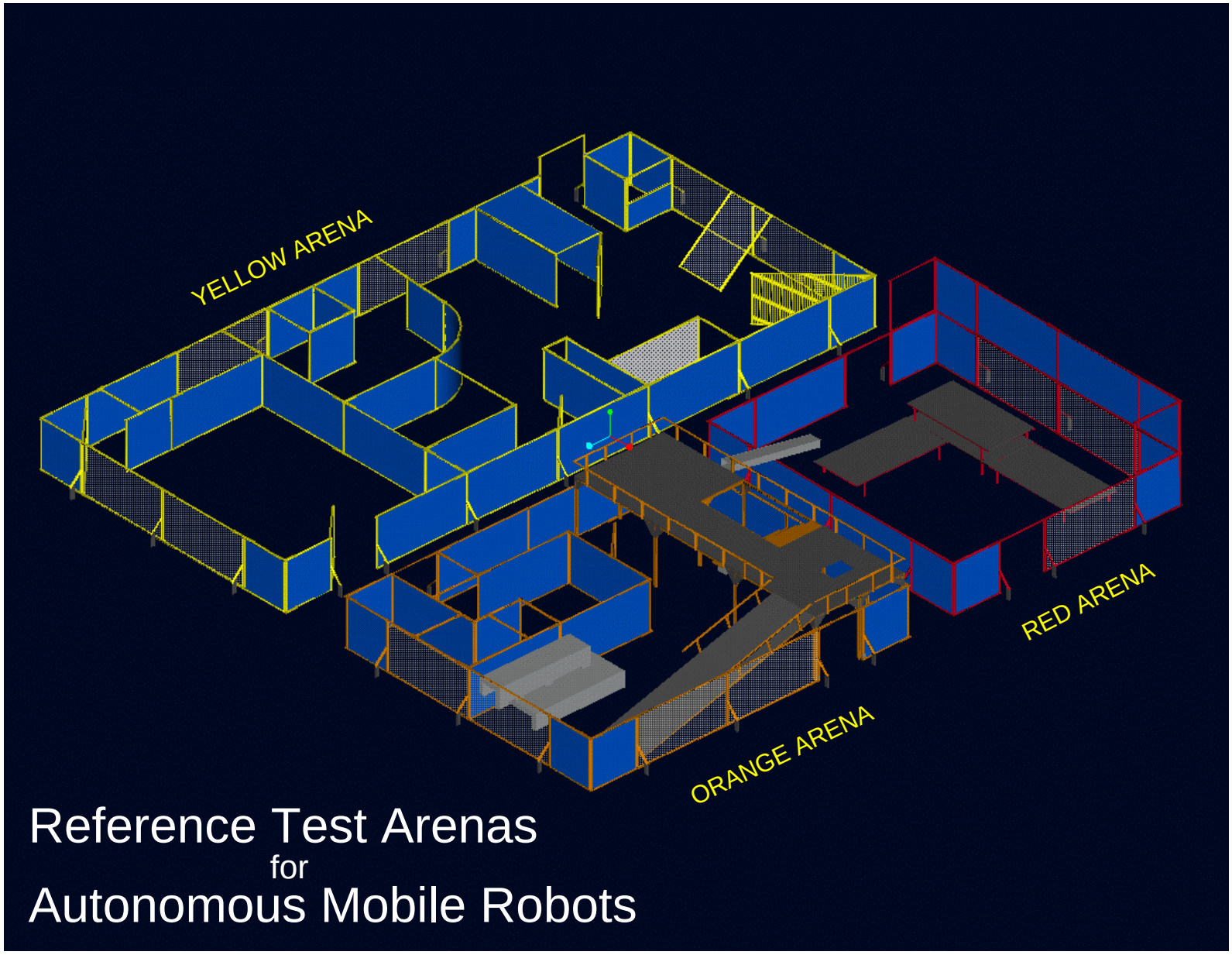
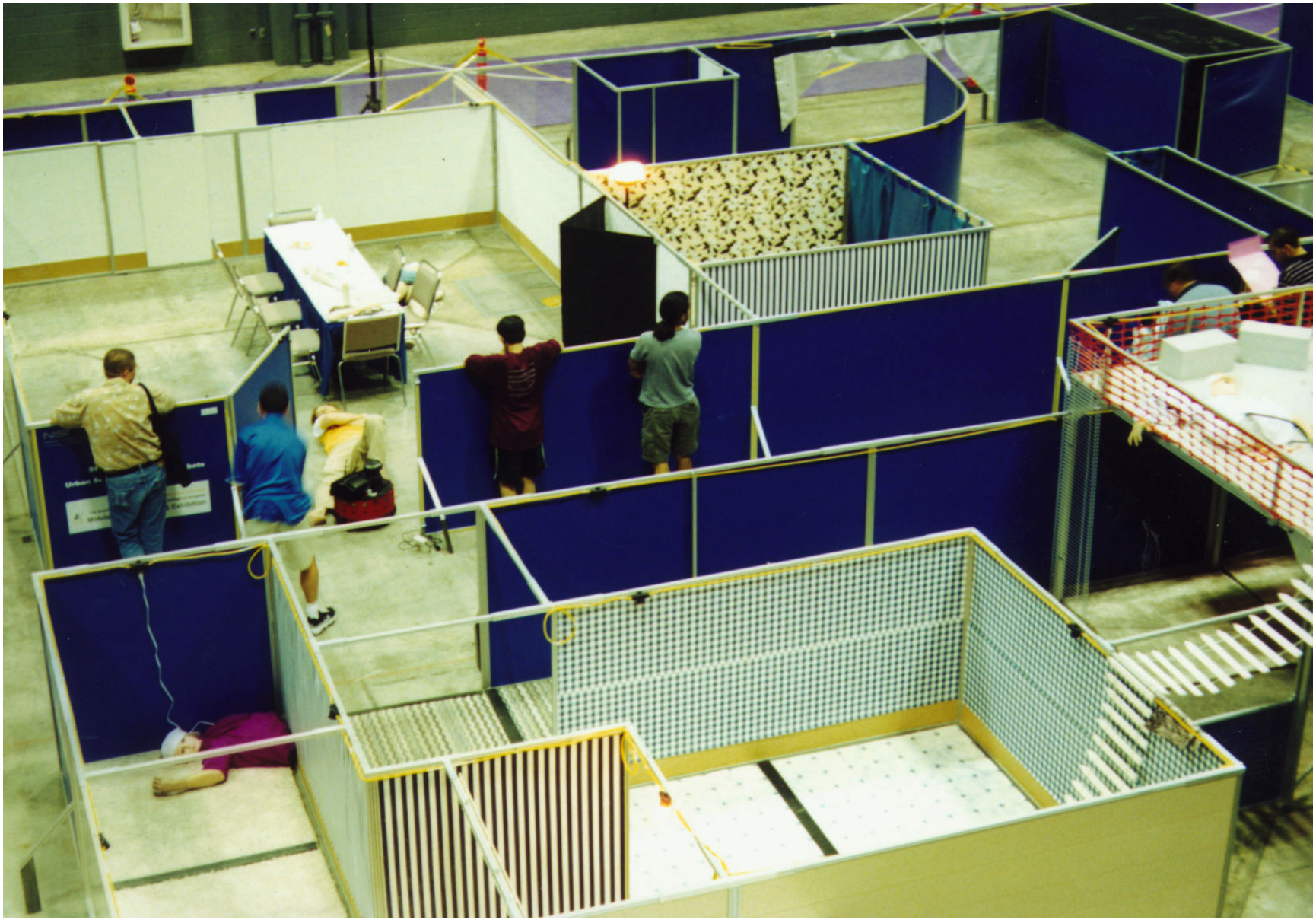
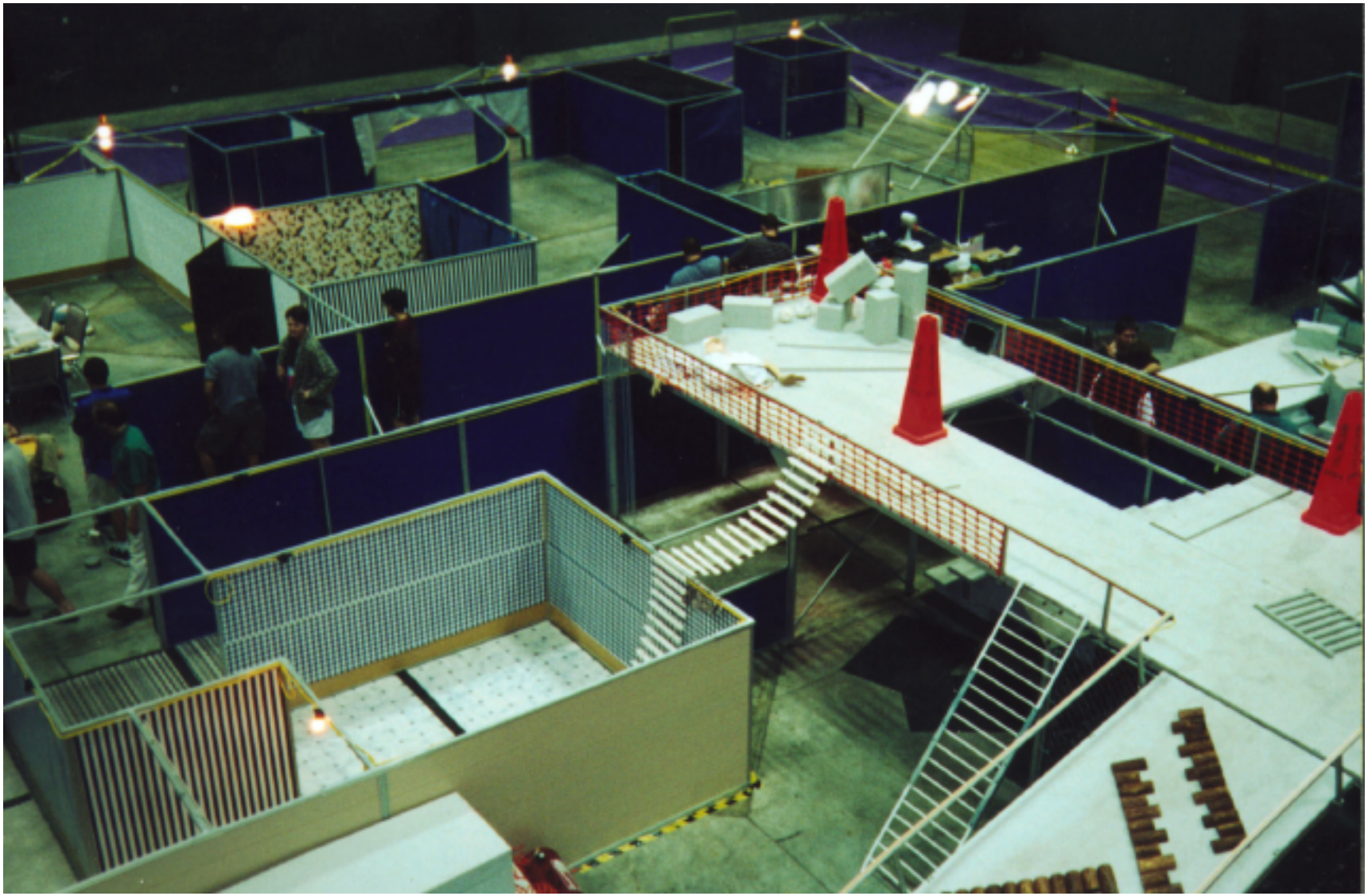
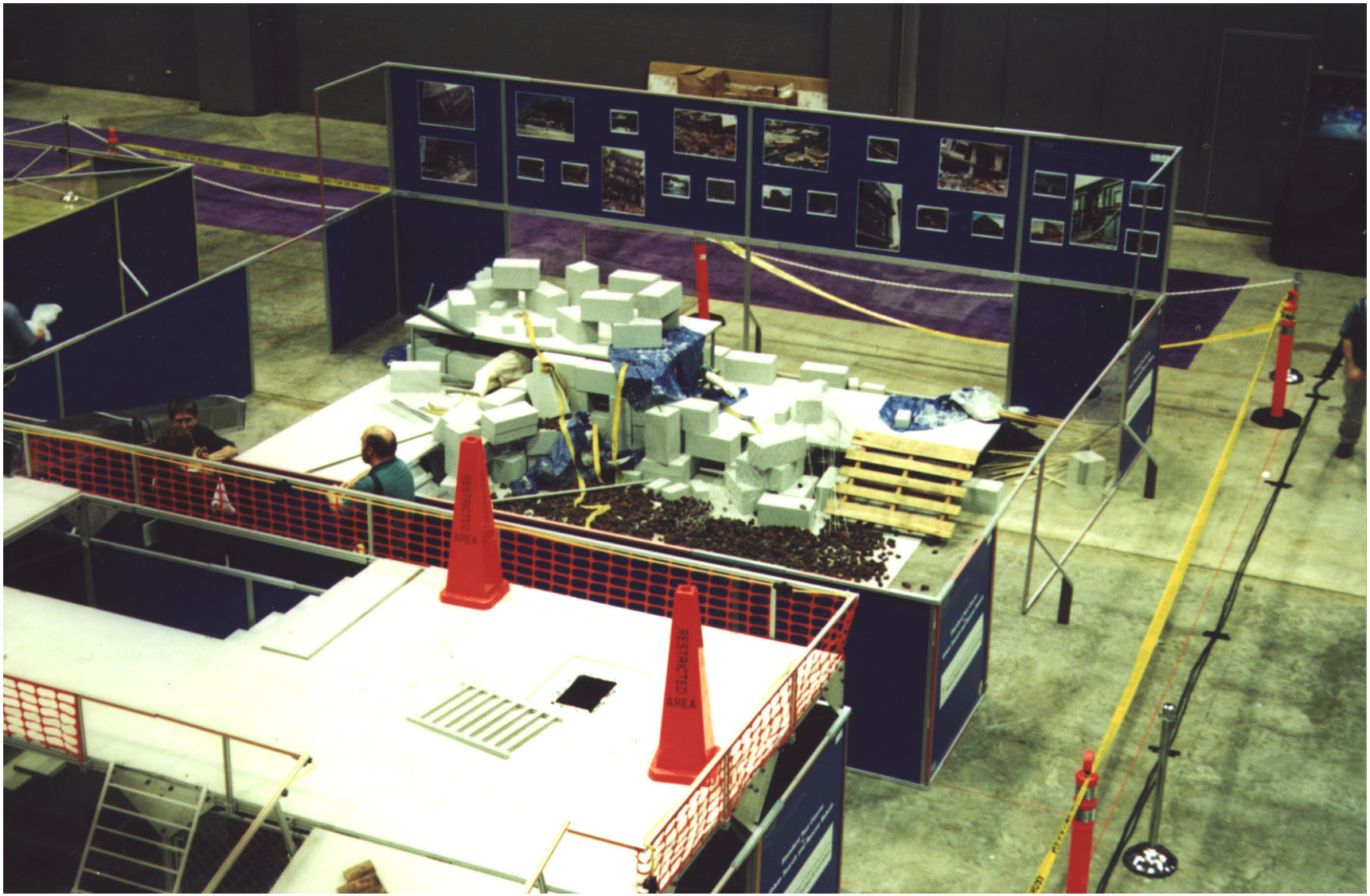


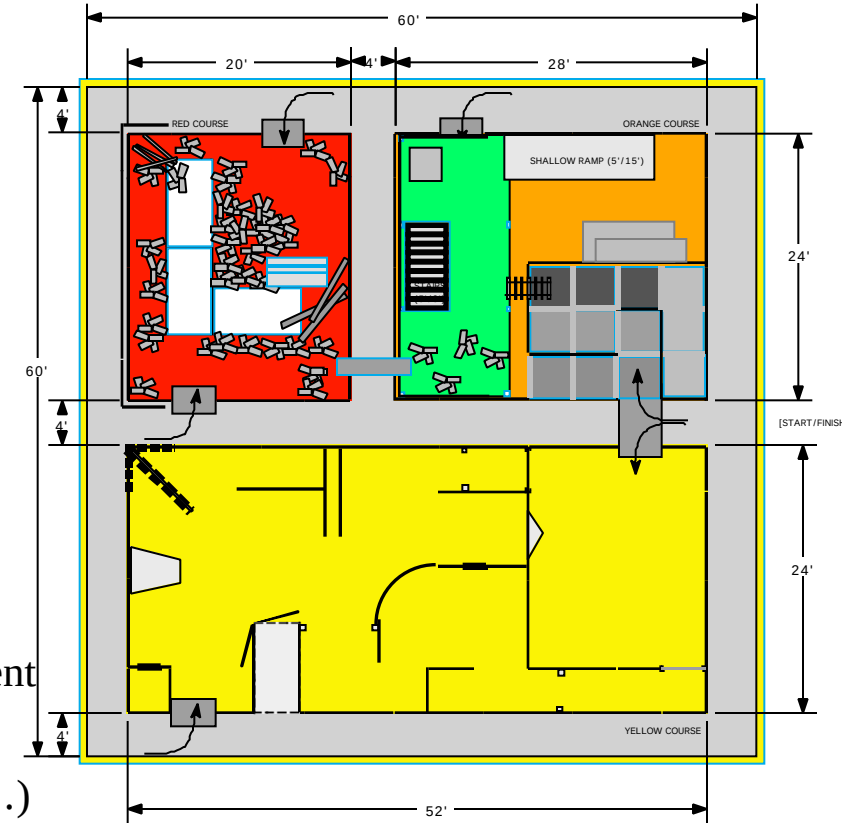
Reference Test Arenas
for
Autonomous Mobile Robots






RESTRICTED AREA
RESTRICTED AREA

NIST's Existing Transportable Arenas

FORMING A CONTINUUM OF CHALLENGES

- **Yellow Region**
  - Simple to traverse, no agility requirements
  - Planar (2-D) maze
  - Isolates sensors with obstacles/targets
  - Reconfigurable in real time to test mapping
- **Orange Region**
  - More difficult to traverse, variable floorings
  - Spatial (3-D) maze, stairs, ramp, holes
  - Similarly reconfigurable
- **Red Region**
  - Difficult to traverse, unstructured environment
  - Simulated rubble piles, shifting floors
  - Problematic junk (rebar, plastic bags, pipes…)